

NEW SPECIES OF COLORADIA (LEPID.,  
SATURNIIDÆ).

BY WILLIAM BARNES AND F. H. BENJAMIN

*Decatur, Illinois***Coloradia davis** Barnes and Benjamin, sp. nov.

Allied to *pandora*, with similar maculation. Fore wing blackish, lacking brownish tints, irrorated with white scales which help to distally define the s. t. line. Hind wing strongly tinged with rufous purple. Beneath strongly tinged with rufous purple.

Expanse: ♂ 62-73 mm., ♀ 74-85 mm.

Type locality: White Mountains, Arizona.

Number and sexes of types: Holotype ♂, 15-30 August, 1925; allotype ♀, 1-15 September, 1925; 54 ♂, 9 ♀ paratypes, various dates in August and September.

Notes: 6 ♂, 3 ♀ are simply labeled "White Mts. Ariz." without further data, have been in the Barnes collection for some years, and were presumably collected by Mr. R. D. Lusk. The remainder were collected by Mr. O. C. Poling near McNary P. O., White Mountains, Arizona. Part of the Poling catch was merely loaned to the Barnes collection to show range of variation and have been returned to Mr. Poling. At his suggestion the species is named *davis* in honor of Mr. Charles L. Davis, Superintendent of the Fort Apache Indian Agency.

**Coloradia luski** Barnes and Benjamin, sp. nov.

A parallel development to *doris*, and bearing the same relation to *davis* that *doris* has to *pandora*. Fore wing black, somewhat irrorated with white scales, the markings diffused. Hind wing strongly tinged with rufous purple. Beneath strongly tinged with rufous purple. Sexually dimorphic, the hind wings of the female darker and more heavily scaled than those of the male.

Because of strong sexual dimorphism present in the smaller forms, *doris* and *luski*, but absent in the larger forms, *pandora* and *davis*, coupled with differences in vestiture, and the obsolescence of the discal spots in *doris* and *luski* lead us to consider them distinct species. This is corroborated by the fact that in the long series of *pandora* and *davis* before us we find no tendency to intergrade with *doris* or *luski*.

Expanse: ♂ 57 mm., ♀ 60 mm.

Type locality: White Mountains, Arizona.

Number and sexes of types: Holotype ♂, allotype ♀, without dates, presumably collected by Mr. R. D. Lusk.

**Coloradia lindseyi** Barnes and Benjamin, sp. nov.

Allied to *pandora* and possibly only a northern race of that species. Fore wing of ♂ with maculation similar to *pandora* but somewhat darker. Secondaries more suffused with pink. Beneath, much more of the pinkish suffusion than in *pandora*. The ♀ has the fore wing much duller and browner, the hind wing and the underside of all wings much more suffused with pink than in *pandora*.

This appears to be the species or form commonly going as *pandora* in collections. It is the form figured by Strecker, 1878, Lep. Rhop. Het., 137, pl. XV, f. 7, from Oregon, as *pandora*. Strecker, 1900, Lep. Rhop. Het., Suppl., III, 30, lists ♂ type *pandora* in his collection, but from page 137 of his prior publication it can easily be seen that this type is spurious, being in reality a subsequent allotype different from the Blake type in the collection of the Academy of Natural Sciences, Philadelphia. Holland, 1903, Moth Book, 91, pl. X, f. 8, illustrates what he calls *pandora*, but the figure is more likely that of a faded *lindseyi*. At least most of the records of *pandora* from the Northwest seem to refer to *lindseyi*. According to type comparisons by Doctor McDunnough, the types of *loiperda* and *pandora* represent the form not uncommon in the vicinity of Glenwood Springs, Colorado.

Expanse: ♂ 78-80 mm., ♀ 82-87 mm.

Type localities: Warner Mountains, three miles east of Davis Creek; Davis Creek, Modoc County, California (A. W. Lindsey); Klamath Falls, Klamath County, Oregon (E. C. Van Dyke).

Number and sexes of types: Holotype, ♂ 8-15 July, 1922, allotype ♀, 24-31 July, 1922, 1 ♂ paratype, 24-31 July, 1922, from Warner Mountains; 1 ♂ paratype, 18 July, 1922, from Davis Creek (4800 feet); 1 ♀ paratype, VII, 1922, from Klamath Falls.

*Note*—A third female, presumably the same, and probably collected by Prof. Owen in northern California or Oregon, is in the Barnes collection, but because of lack of label it is not

made a type; a fourth male from Fresno County, California, also seems to fall here.

**Coloradia bonniwelli** Barnes and Benjamin, sp. nov.

Allied to *pandora*, with similar maculation, ♂, fore wing darker, intermediate to *davisi*, contrasty. ♀ similar to *pandora*, fore wing with the ground smoother, as in *doris*, but the maculation contrasty, hind wing as in *pandora*. Both sexes with undersides as in *pandora*. The average size smaller than *pandora*.

Expanse: ♂ 64-70 mm., ♀ 75 mm.

Type locality: High Rolls, New Mexico (J. G. Bonniwell).

Number and sexes of types: Holotype ♂, allotype ♀, 2 ♂ paratypes, all labeled 9-20.

**Coloradia chiricahua** Barnes and Benjamin, sp. nov.

Allied to *pandora*, with similar maculation, but much smaller. Fore wing with black transverse lines more intensified on a ground more heavily powdered with white scales, s. t. line strongly defined by white distally. Hind wing nearly white, slightly tinged with pink. No trace of the brownish or sordid appearance of *pandora*. Beneath paler than in *pandora*, and lacking much of the sordid appearance of that species.

Expanse: 60 mm.

Type locality: Chiricahua Mountains, Cochise County, Arizona.

Number and sexes of types: Holotype ♂, without date, unique.

**Coloradia duffneri** Barnes and Benjamin, sp. nov.

Allied to *pandora*, with similar maculation. Fore wings lacking brownish tints and heavily irrorated with white. The transverse lines more intensified. S. t. line obsolescent, but distally defined by white scales. Space between t. a. and t. p. lines so powdered with white as to appear disconcolorous and contrasting. Discal dot reduced to about half normal size. Hind wing with the rufous stronger. Beneath with the rufous more intensified.

Expanse: 67 mm.

Type locality: Paradise, Cochise County, Arizona. (O. Duffner via O. C. Poling.)

Number and sexes of types: Holotype ♂, labeled "Fall 1925," unique.